



Clear Creek Forest

Preliminary Park Management Plan



Clear Creek Forest Preliminary Park Management Plan

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Opportunity to Comment

Ontario Parks is presently undertaking the development of a management plan for Clear Creek Forest Recommended Provincial Park (Nature Reserve Class). As part of the planning process, Ontario Parks is pleased to present the *Clear Creek Forest Preliminary Park Management Plan*.

The preliminary plan contains proposed policies relating to resource management, operations and development that will guide the management of Clear Creek Forest Recommended Provincial Park over the next 20 years. After careful consideration of the background information collected and review of comments received, this document represents Ontario Parks' preferred policy for the park.

You are invited to review and comment on the preliminary management plan. An open house will be held at the Highgate Community Hall on March 5, 2011 from 11:00am to 2:00pm to allow interested individuals and parties the opportunity to inspect the plan, view maps and discuss issues with members of the planning team.

All comments regarding the preliminary park management plan should be submitted to:

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The Ministry of Natural Resources (MNR) is collecting your personal information and comments under the authority of Ontario's *Provincial Parks and Conservation Reserves Act*. Any personal information you provide (address, name, telephone, etc.) will be protected in accordance with the *Freedom of Information and Protection of Privacy Act*, however your comments will become part of the record of consultation and may be shared with the general public. Your personal information may be used by the MNR to send you information about future MNR planning initiatives in the park area. If you have questions about the use of your personal information, please contact the above-noted individual.

Your participation in planning for this recommended provincial park is appreciated. All comments received will be considered during the preparation of the final provincial park management plan.

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1.0 CONTEXT

1.1 Provincial Parks and Conservation Reserves Act

The *Provincial Parks and Conservation Reserves Act* (2006) is the legislation that guides the planning and management of the protected areas system. The act has two specific principles that guide all aspects of planning and management of Ontario's system of provincial parks and conservation reserves:

- Maintenance of ecological integrity shall be the first priority and the restoration of ecological integrity shall be considered
- Opportunities for consultation shall be provided. 2006, c. 12, s. 3

1.2 Statement of Environmental Values and the Environmental Bill of Rights

The Ministry of Natural Resources' Statement of Environmental Values (SEV) under the *Environmental Bill of Rights* (EBR) describes how the purposes of the EBR are to be considered whenever decisions are made in the Ministry that might significantly affect the environment. This includes decisions made as a result of preparing management direction for a protected area.

The Ministry's SEV has been considered throughout the planning process. The management direction for Clear Creek Forest will further the objectives of managing Ontario's resources on an environmentally sustainable basis.

1.3 Aboriginal Peoples

Local Aboriginal communities include both the Caldwell First Nation and Bkwejwanong Territory (Walpole Island). These communities have been invited to engage in the park management planning process for Clear Creek Forest.

1.4 Planning Context

This preliminary park management plan has been prepared consistent with direction contained in *Our Sustainable Future, Ministry of Natural Resources Strategic Directions* (2005). The Ministry's vision is "sustainable development", and the Ministry's

mission is "ecological sustainability". The Ontario Parks program contributes mainly to the Ministry's goal of: "Healthy Natural Environment for Ontarians", but contributes to other strategic elements as well. The mandate of the Ministry for Ontario Parks is to deliver Ontario's parks and protected areas program, which includes: the protection and management of provincially significant natural, cultural, and recreational environments; provincial parks operations; provision of tourism opportunities, natural heritage education; planning and management of parks and protected areas; policy leadership on conservation reserves; monitoring, auditing, and public reporting on Ontario's parks and protected areas.

This document has also been prepared consistent with direction contained in *Protecting What Sustains Us: Ontario's Biodiversity Strategy* (2005). Ontario Parks supports both the first goal: "Protect the genetic, species and ecosystem diversity of Ontario", and the second goal: "Use and develop the biological assets of Ontario sustainably, and capture benefits from such use for Ontarians". In particular Clear Creek Forest will be managed to protect any species at risk and their habitats.

1.5 Consultation

1.5.1 Summary and Results of Aboriginal Consultation

Aboriginal consultation for the Clear Creek Forest park management planning process consisted of the direct mailing of notices to a number of Aboriginal groups inviting them to inspect and comment on the project terms of reference and relevant background information for Clear Creek Forest and to attend a public open house, held on October 15, 2004. The notice and terms of reference were distributed in advance of initiating the formal public consultation process. Additional correspondence was subsequently sent to the Chiefs of the Bkwejwanong Territory (Walpole Island) and the Caldwell First Nation to provide an update on the status of the planning process and to reiterate that Ontario Parks is prepared to consult directly with their communities on this planning project.

Ontario Parks staff met with representatives of Bkwejwanong Territory (Walpole Island) on May 21, 2009 to discuss the planning, long term management and the proposed boundary of Clear Creek Forest. As a result of that discussion, Ontario

Parks has withdrawn the option of a regulated water boundary on Lake Erie so as to not interfere with the First Nation's Aboriginal title claim. Ontario Parks will continue its dialogue with Aboriginal communities in the planning and management of Clear Creek Forest.

1.5.2 Summary and Results of Public Consultation

Consultation is a very important part of the park management planning process. The four phases of the process consist of:

- Phase 1 - Terms of Reference
- Phase 2 - Background Information
- Phase 3 - Preliminary Park Management Plan
- Phase 4 - Approved Park Management Plan

Phase 1 consisted of a 45-day public opportunity to inspect the approved Terms of Reference for the park management planning process in the spring of 2004. An initial invitation to participate was mailed out to 87 local residents and stakeholders announcing the upcoming consultation and planning process and a notice was posted on site at the park. A policy proposal notice was posted on the EBR Environmental Registry.

Phase 2 focused on providing an opportunity for interested groups and individuals to review relevant background information. To initiate the 45-day review period, a notice was mailed to 104 local residents and stakeholders in September 2004. An open house was held at the community library in Highgate on October 15, 2004. Approximately 12 interested persons attended to speak with representatives of Ontario Parks and The Nature Conservancy of Canada (NCC). An updated policy proposal notice was posted on the EBR Environmental Registry.

There will be an opportunity to inspect the Preliminary Management Plan for a minimum period of forty-five (45) days after its formal release. This will allow interested participants to comment on proposals in the plan.

Phase 3 included the preparation, approval and publication of the *Clear Creek Forest Preliminary Park Management Plan*. Notices highlighting the availability of the document were distributed directly to 136 stakeholders, adjacent property owners and other interested individuals. A paid advertisement was placed in local and regional newspapers to invite written comments. A public open house was

held at the Highgate Community Hall on March 5, 2011. An updated policy proposal notice was posted on the EBR Environmental Registry.

A land use amendment will be coordinated with the park management planning process, commencing at phase 3. The amendment will address the establishment of Clear Creek Forest as a recommended provincial park (nature reserve class).

As part of phase 4, all comments will be considered in the preparation of the final park management plan. Any changes resulting from public comments will be summarized in the final document. This stage of the planning process will culminate with the release of the approved *Clear Creek Forest Park Management Plan*. Copies of the document will be distributed to those groups or individuals who directly participated in the process. A paid advertisement will be placed in local newspapers and a policy decision notice will be also posted on the EBR Environmental Registry.

2.0 INTRODUCTION

As part of the *Ontario Parks Legacy 2000* partnership, Ontario Parks and NCC worked together to secure significant natural areas for new provincial protected areas. Clear Creek Forest is one of several properties being protected under this partnership through considerable local community-based effort.

To achieve the goal of acquiring and securing new areas, *Ontario Parks Legacy 2000* developed new innovative arrangements for area protection and management. In the case of Clear Creek Forest, title to the acquired parcels is held by either the NCC or the Province of Ontario (as represented by the MNR). Ontario Parks is responsible for regulating, planning, managing and protecting the site as a nature reserve class provincial park under a long-term lease agreement endorsed in 2001.

Other close by provincial protected areas include Rondeau Provincial Park and John E. Pearce Provincial Park, near the communities of Morpeth and Wallacetown, respectively (see Figure 1). The significant life, earth and cultural resources of Clear Creek Forest make an important contribution to the Ontario Provincial Parks system. The protection of the site's significant natural and archaeological features is a high priority.



Clear Creek Forest

Figure 1: Regional Setting

Legend

- ★ Clear Creek Forest
- Provincial Park
- Road
- Highway
- ▨ Lake / River



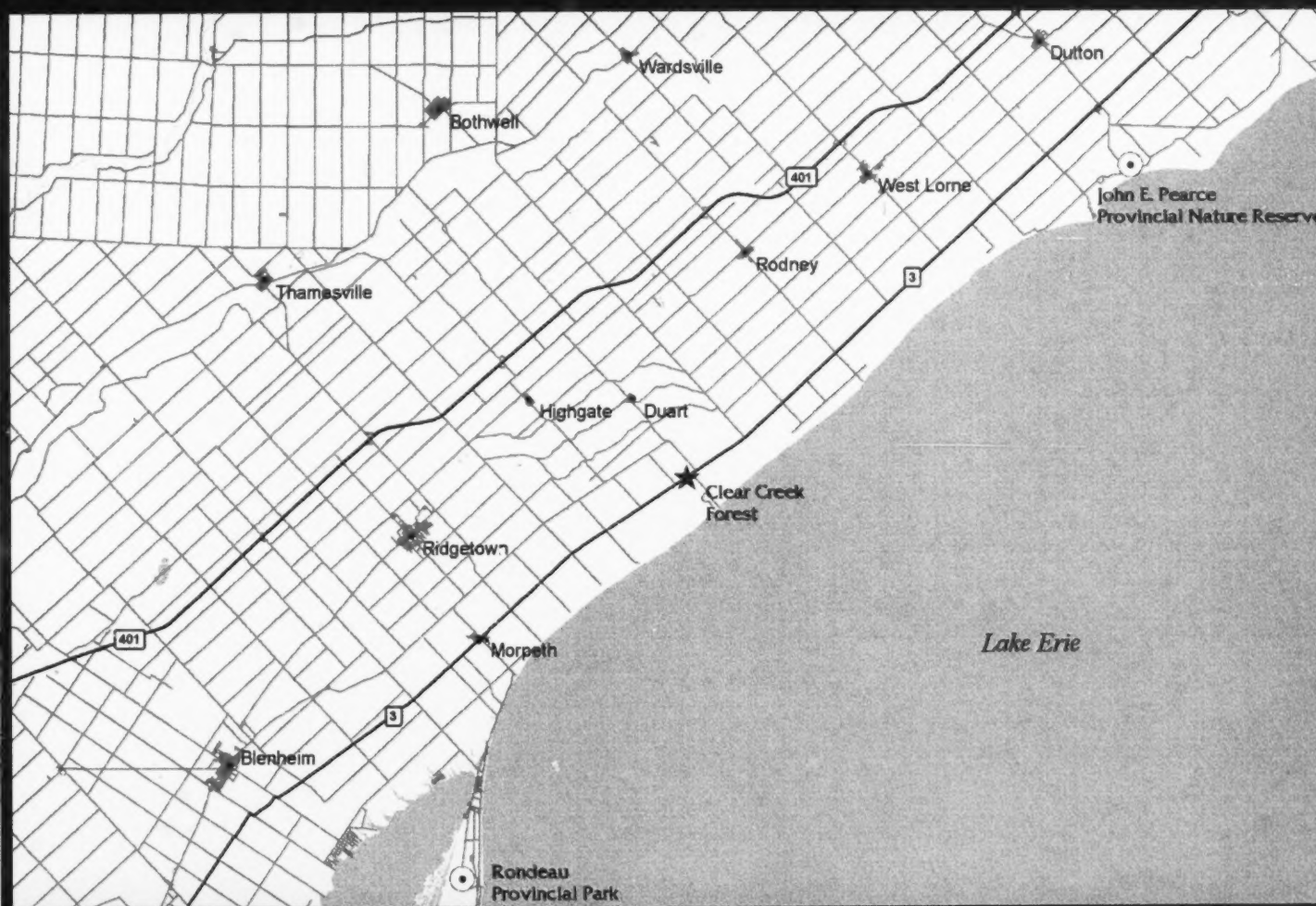
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This map is for illustrative purposes only.
Do not rely on it as being a precise indicator
of routes, locations or features nor as a guide
to navigation.

Prepared by Ontario Parks, Southwest Zone,
September 2009



Ontario



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The 393 hectares of acquired lands associated with Clear Creek Forest are situated in the Municipality of Chatham-Kent, Geographic Township of Orford, at Clearville, approximately four kilometres west of the Elgin County municipal boundary. The various parcels associated with the site are located both north and south of Talbot Trail (Chatham-Kent Road 3) and north of Cochrane Line (see Figure 2).

Clear Creek Forest will be a non-operating provincial park and is one of the largest protected areas in the Municipality of Chatham-Kent, second only to Rondeau Provincial Park. The site is particularly significant for the large tracts of Carolinian forest and associated species that are found there. The majority of lands comprising Clear Creek Forest are situated within the provincially significant Kent-Elgin Shoreline Life Science Area of Natural and Scientific Interest (ANSI). Areas of Natural and Scientific Interest are designated by the MNR and contain natural landscapes or features which have been identified as having values related to protection, natural heritage appreciation, scientific study or education.

Existing development consists of:

- An old pump house and associated well formerly used for watering livestock are located just south of Talbot Trail.
- A stone foundation and two abandoned water wells associated with a former farm house are located south of Cochrane Line.
- An abandoned oil and gas well is situated south of Talbot Trail. Petroleum Resources Centre, MNR, records indicate the well was sealed in 1938.
- An abandoned gravel pit is located immediately north of Cochrane Line.

Adjacent land uses include: agriculture; rural residential; Clearville Cemetery; aggregate extraction (Orford Sand and Gravel); Scouts Canada Camp Catawaqui; and a municipal campground, picnic area, beach and boat launch (Clearview Park).

The approved plan will guide the management, operation and development of Clear Creek Forest over the next 20 years. The plan may be reviewed or amended as the need arises. At the ten year interval, this plan will be examined for the need for a review or amendment. Section 13.0 describes the process for examination and amendment of the plan.

The *Clear Creek Forest Park Preliminary Management Plan* has been developed in accordance with the *Ontario Provincial Parks Planning and Management Policies* (1992) and the Ministry of Natural Resources' *Chatham District Land Use Guidelines* (1983). In accordance with the plan, MNR will amend affected area-specific land use policies and mapping found in the Crown Land Use Policy Atlas.

3.0 SUMMARY OF SIGNIFICANT MANAGEMENT CONCERNS

Concerns have been raised related to non-permitted activity occurrences including sport hunting, off-road vehicle use and horseback riding, firewood collection and dumping. Alien and invasive species (e.g., garlic mustard) have been identified in the park. On-going management, education and enforcement will be implemented to address these issues.

4.0 CLASSIFICATION

All provincial parks in Ontario fall into one of six classes: *wilderness, nature reserve, cultural heritage, natural environment, waterway or recreational*. Clear Creek Forest is recommended to be regulated under Ontario's *Provincial Parks and Conservation Reserves Act* as a provincial park (nature reserve class).

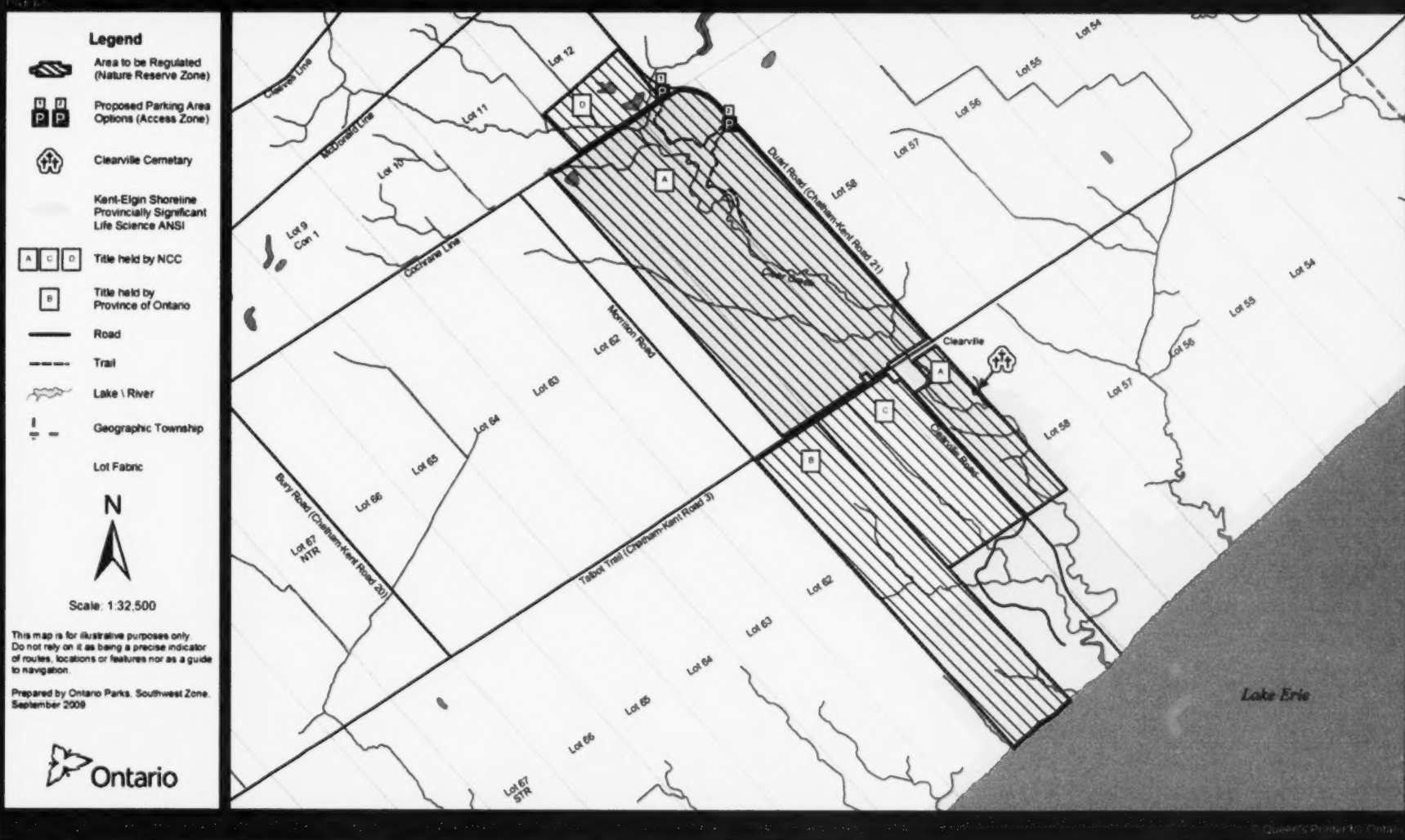
Nature reserve class parks are areas selected to protect representative ecosystems and provincially significant elements of Ontario's natural heritage, including distinctive natural habitats and landforms, for their intrinsic value, to support scientific research and to maintain biodiversity.

The Clear Creek Forest properties were acquired by the NCC under the *Ontario Parks Legacy 2000* partnership with the intent of establishing a nature reserve class provincial park. During fund raising efforts, site tours and a dedication ceremony, the NCC has consistently promoted Clear Creek Forest as a nature reserve.



Clear Creek Forest

Figure 2: Zoning and Proposed Development



5.0 GOAL

The goal for Clear Creek Forest is to preserve the park's environment, which contains provincially significant biological features and cultural resources.

Clear Creek Forest will be managed for the people of Ontario as a nature reserve class provincial park, protected from the impacts of human activity, now and in the future. The park is governed by Ontario's *Provincial Parks and Conservation Reserves Act*, *Ontario Provincial Parks Policy* and *Ontario Provincial Parks: Planning and Management Policies*.

6.0 OBJECTIVES

Ontario's protected areas system has four objectives for establishing and managing provincial parks, as stated in the *Provincial Parks and Conservation Reserves Act*:

- to permanently protect representative ecosystems, biodiversity and provincially significant elements of Ontario's natural and cultural heritage and to manage these areas to ensure that ecological integrity is maintained;
- to provide opportunities for ecologically sustainable outdoor recreation opportunities and encourage associated economic benefits;
- to provide opportunities for residents of Ontario and visitors to increase their knowledge and appreciation of Ontario's natural and cultural heritage; and
- to facilitate scientific research and to provide points of reference to support monitoring of ecological change on the broader landscape.

As a recommended provincial park (nature reserve class), Clear Creek Forest contributes to these objectives in the following ways.

6.1 Protection

Protection will be achieved through appropriate zoning, control of land use and activities, education, and monitoring of ecological impacts. Appropriate mitigation of potential impacts will ensure continued protection of significant features. Park management plans may consider potential impacts that activities occurring in adjacent areas may have on park values and features. Park management plans may

also consider the impacts of park activities on adjacent land and water uses.

Ontario's protected areas play an important role in representing and conserving the diversity of Ontario's natural features and ecosystems, across the broader landscape. Protected areas include representative examples of life and earth science features, and cultural heritage features within ecologically or geologically defined regions. Ontario's ecological classification system provides the basis for the life science feature assessment, and the geological themes provide the basis for earth science assessment.

6.1.1 Life Science

Clear Creek Forest lies within Ecodistricts 7E-1 and 7E-2 (an ecological classification based on bedrock, climate and landform) and the Carolinian Life Zone (a zone representing the extreme southwest region of Ontario where the eastern deciduous forest of North America has its most northern limits). It is within this zone that the highest frequencies of species at risk are found in Canada. Clear Creek Forest is comprised of primary hardwood forest communities, secondary upland forests, hawthorn savanna and cropped fields. The site is the largest woodland in the provincially significant Kent-Elgin Shoreline Life Science Area of Natural and Scientific Interest (ANSI).

The ANSI contains examples of 18 plant species considered to be of Carolinian affinity. This closed-canopy deciduous forest contains typical species such as red oak, sugar maple, and American beech. Twenty-four rare vascular plants have been recorded, including the tall ironweed, which is a species of the midwestern prairies.

There are also noteworthy examples of fauna found in Clear Creek Forest. Ten mammals have been recorded and include the southern flying squirrel. The provincially rare giant swallowtail, along with 15 other butterfly species, has been documented. Ten herptiles have also been recorded on this site; one of which has been designated as being at risk.

Clear Creek Forest also protects a large portion of Clear Creek, and its associated riparian and flood plain habitats, all of which contribute to the site's biodiversity. There is the potential that additional species at risk may inhabit the creek itself including fishes, molluscs and other invertebrates. Clear Creek also acts as an important ecological linkage

between Lake Erie and core natural areas within Ecodistricts 7E-1 and 7E-2.

Approximately seventy bird species have been noted in the ANSI, including significant species such as the red-headed woodpecker, loggerhead shrike and Acadian flycatcher. Over 20 bird species of concern, as identified by the Municipality of Chatham-Kent, have been recorded at the site. Clear Creek Forest has been designated as a nationally significant Important Bird Area due to the endangered species habitat it provides.

6.1.2 Earth Science

Bedrock Geology:

The bedrock surface occurs beneath glacial deposits at a depth of up to 18 metres, and no outcrops are exposed within Clear Creek Forest. The underlying bedrock consists of the Middle Devonian Hamilton Group near its contact with the Upper Devonian Kettle Point Formation which lies immediately to the west. The Hamilton Group consists of inter-bedded limestones and shales. The Kettle Point Formation is a black shale.

Surficial Geology:

Drainage is to the southeast into Lake Erie. The surface expression of the nature reserve is slightly undulating with a total relief of 22 metres from the upland surface in the north to the level of Lake Erie. This relatively featureless plain is punctuated by small drainage valleys. These were cut into the plain during early postglacial erosion following the drainage of glacial ice-contact lakes from the region. Modern enlargement of these drainage ways by runoff and lake action resulted in the landscape we see today.

Clear Creek Forest lies on the south-central part of the Bothwell Sand Plain, a plain dominated by thin Glacial Lake Warren glaciolacustrine (deposited in glacial lakes) sands overlying glaciolacustrine clays, overlying thick deposits of till. This sand plain is generally level, except where dissected by gullies and streams. These gullies are evident along the shore of Lake Erie within the nature reserve.

The upland area of Clear Creek Forest is part of a large area of clayey silt till dissected by Clear Creek. The creek has cut a prominent valley through the glaciolacustrine sands, clays and tills, reworking the material into modern alluvial deposits of silt and sand. The plain lies between the present

shoreline of Lake Erie and a complex of raised shorelines which include representation of glacial Lakes Warren, Arkona and Whittlesey, immediately to the north and northwest of the nature reserve.

A small area of glaciofluvial outwash deposits (sand, minor gravel) is evident in the extreme northeast corner of the nature reserve (immediately south of Cochrane Line). Another small area, consisting of aeolian (wind-blown) fine sands, are found in the extreme northwest corner of the park in the vicinity of an operating sand and gravel pit (at the junction of Cochrane Line and Duart Road). The aeolian fine sands are a thin (less than 1 metre) veneer, derived from the sandy outwash deltaic materials associated with Glacial Lake Algonquin. The geological features are considered to be locally significant.

6.1.3 Cultural Resources

There is evidence of early occupation by native peoples at Clear Creek Forest (Clearville Prehistoric Village Site). In 1939, a preliminary archaeological survey (Jury 1941) highlighted that the area of Clearville experienced three separate native occupations, all Late Woodland, prior to European settlement. In 1993, an archaeological site was discovered by Michael W. Spence in an area now within the boundary of Clear Creek Forest. Dating of the artefacts indicates a period of occupation between 900 and 1500 A.D. The site was likely chosen for its close access to water, and its high location, which was easily defensible.

Colonel Talbot is considered to be the person who colonized the area with European settlers. The naming of Talbot Trail, which bisects the property, signifies this. The Talbot Trail was completed in the 1820's and extended approximately 500 kilometres from Amherstburg (Fort Malden) to Fort Erie. This route eventually was renamed Highway 3 and was key in settling southwestern Ontario (Elgin Connects 2006).

The cemetery containing the gravesites of the founders and residents of the former hamlet of Clearville abuts the nature reserve.

Until 1965, approximately 80 hectares of upland forest, comprising the northern portion of Clear Creek Forest, was lightly harvested for timber. Concurrent use of the forest, terminating around the same time as logging, included the grazing of cattle. Historical land use has also included field cropping.

6.2 Knowledge and Appreciation

Individual and group exploration and appreciation will be encouraged, where compatible with (and complementary to) protection of life and earth science features. A self-guided interpretive trail will facilitate exploration and appreciation of the nature reserve.

6.3 Research and Monitoring

Scientific research, inventories and monitoring may be conducted, as necessary, to provide information to support planning and management decisions intended to ensure the ecological sustainability of the park.

7.0 BOUNDARY

Ontario Parks is committed to an ecosystem approach to park planning and management. The *Provincial Parks and Conservation Reserves Act*, which governs activities within provincial parks, pertains only to lands and waters within park boundaries. An ecosystem approach allows park management to consider the relationship between the park and the surrounding environment. Park managers may consider potential impacts on park values and features from activities occurring on adjacent lands, and potential impacts from park activities on land uses in adjacent areas. Ontario Parks will encourage efforts of adjacent landowners to protect significant natural and cultural features outside park boundaries.

Park management plan policies apply only to the area within the regulated boundary of the park. Within the park boundary, the protection of park values and features will be achieved through appropriate zoning, control of land use and activities, education, and monitoring of ecological impacts.

Ontario Parks will support in principle the acquisition of property for the purposes of addition to the park, if acquisition will enhance the values of the park. Acquisition or securement will be subject to funding and willingness of owners to sell or lease their properties or to enter into a conservation easement.

The recommended provincial park boundary is shown in Figure 2. The acquired land base for

Clear Creek Forest currently totals 393 hectares (parcels A, B, C, and D).

Title to the original land acquisition (see Figure 2, parcel A) was retained by the NCC. Title to subsequent land acquisitions were registered to either the Province of Ontario (as represented by the MNR), (parcel B) or the NCC (parcels C and D). A long term lease agreement with the NCC grants tenure, which enables Ontario Parks to regulate the properties as part of the nature reserve.

The Clearville Cemetery was acquired by the NCC, however, that property and an access lane will be excluded from the nature reserve (see Figure 2).

Two former oil and gas leases associated with part of Lot 60, Concession South of Talbot Road (STR) have been surrendered.

8.0 ZONING

Lands and waters contained within Clear Creek Forest are zoned in accordance with their environmental and cultural features and values and their sensitivity to development. The two zoning categories designated for Clear Creek Forest (*nature reserve zone* and *access zone*) are based on the *Ontario Provincial Parks: Planning and Management Policies*. The zones differentiate the sensitivity of natural and cultural values, and the permissible degree of development and recreational uses and management practices within the park (see Figure 2).

8.1 Nature Reserve Zone

Nature reserve zones protect the provincially significant earth and life science features within a park, and may include a protective buffer area in which a minimum of development is permitted.

The 393 hectare nature reserve zone protects the provincially significant life science features within the park and includes former farm fields that have been, or will be, restored to natural conditions.

Development will be restricted to self-guided interpretive walking trails and interpretive panels.

8.2 Access Zone

Access zones serve as staging areas, a means of both providing and regulating use in areas of a park

for extensive recreation. Generally development is limited to roads and visitor control structures. Provisions may be made for limited orientation, interpretive or educational facilities, though generally more for self-use rather than through structured personal service. Limited facilities for research and park management may also be present. This could include facilities for equipment storage and/or a vault toilet.

The 0.5 hectare access zone will include a small parking area to provide access to the walking trails.

9.0 RESOURCE MANAGEMENT POLICIES

Clear Creek Forest will be managed in accordance with the policies set out in the *Ontario Provincial Parks: Planning and Management Policies*.

The following policies will guide the management of park resources consistent with the *Endangered Species Act*, the *Provincial Parks and Conservation Reserves Act* and with the requirements of the *Environmental Assessment Act*. All resource management projects will be undertaken consistent with *A Class Environmental Assessment for Provincial Parks and Conservation Reserves* (2005)

An adaptive management approach will be applied to resource management activities within Clear Creek Forest. Adaptive management allows for frequent modification of management strategies in response to monitoring and analyzing the results of past actions to improve resource stewardship.

9.1 Alien and Invasive Species

Alien species are plants, animals, and micro-organisms that have been accidentally or deliberately introduced by human activity into habitats outside their normal range. Invasive species are those harmful alien species whose introduction or spread threatens the environment, the economy and/or society, including human health. Alien species may originate from other continents, adjacent countries or from other ecosystems within Ontario or Canada. Free from predation and competition that would normally limit their distribution and abundance in their natural habitats; many of these invasive species reproduce quickly. Invasive species may negatively affect native species and/or habitats, as well as agricultural crops, causing significant ecological

and economic damage. Alien species will not be deliberately introduced into the park.

Where practical and feasible, actions will be taken to eliminate or reduce the threat of invasive species which may be affecting the diversity of naturally occurring populations. Prescribed burns may be used to encourage native flora to establish or expand in the meadow habitat and discourage alien species from expanding their range.

9.2 Landform and Water

Shoreline erosion is a natural process occurring along the Lake Erie shoreline. No shoreline hardening will be undertaken as this is likely only to shift the problem further along the shoreline.

Gully erosion will be reduced through vegetative restoration of former agricultural fields.

The former gravel pit north of Cochrane Line will be rehabilitated to a regionally appropriate natural community (e.g., meadow or hardwood forest).

Means of improving and restoring more natural stream flow to Clear Creek will be investigated.

9.3 Species at Risk

Species at risk will be protected consistent with the *Endangered Species Act* and regulations.

9.4 Extirpated and Existing Native Species

Extirpated native species may be reintroduced, and existing populations replenished, if biologically feasible and acceptable, and desirable for perpetuating park values. Existing stands may also be replenished where necessary to rehabilitate disturbed areas expected to sustain continuing heavy use (such as trails). Planting will use seed stocks native to the park, or local seed zone, wherever possible.

9.5 Vegetation

No commercial harvesting of timber will be permitted. Except where there is threat to public safety, dead trees will be left standing to serve as important habitat for resident cavity nesting birds and mammals. Dead tree falls and tip-ups will also be left in place to serve as important sites for

mosses and fungi, germination areas for tree species requiring rotting wood as a rooting medium, and moist shelters for small mammals, reptiles, amphibians and a variety of insects.

Private agricultural use of the nature reserve will not be permitted. At the time of the land purchases by the NCC, there were several large fields still in crop production. Starting in 2001, most of these agriculture lands were retired and naturalized. Although many of the original forests on the property had been historically cleared, there were two examples of mature forest which were used as models in the restoration efforts. The balance of acquired agricultural fields in the nature reserve will also be restored to complement the adjacent forest cover, using techniques such as pit and mound.

The occurrence of insects and diseases native to the forest region in which the nature reserve is situated is recognized as an integral component of the ecology of the nature reserve. Native insect infestations and diseases will normally be allowed to progress naturally. If such outbreaks threaten values for which the nature reserve was established to protect, they may be controlled where feasible, using biological controls whenever possible.

Insects and diseases not native to the nature reserves' forest region will be controlled where feasible. When control is undertaken, it will be directed as narrowly as possible to the specific insect or disease, so as to have minimal effects on the balance of the nature reserve's environment. Biological controls will be used whenever possible.

Unauthorized use of the property by motorized vehicles (primarily all-terrain vehicles) has resulted in erosion and vegetation trampling. This, in turn, can contribute to the introduction of invasive plant species such as garlic mustard.

Vegetation management targets will include, but are not limited to:

- protective and restorative management for species at risk and their habitats;
- perpetuating an old growth Carolinian forest;
- increasing the amount of interior forest through restoration of open fields;
- control of invasive flora, insects and herbivores;
- the protection of plant communities from adverse impacts such as trampling; and
- maintaining some areas of open meadow to benefit significant species that utilize that habitat.

Prescribed fire, pit and mound mechanized excavation, limited application of herbicides, and/or other appropriate techniques may be utilized in future to restore and maintain natural values for which the nature reserve was established to protect.

9.6 Forest Fire Management

The Forest Fire Management Strategy for Ontario (OMNR 2004) provides strategic direction for the management of wildfire across Ontario. Clear Creek Forest is in the Southern Ontario Fire Management Zone according to this provincial strategy. The Municipality of Chatham-Kent Emergency Services is responsible for fire protection and response in the park. Ontario Parks will pursue an agreement with the municipality for managing forest fires that occur within the park in accordance with MNR policy on Fire Management South of the Fire Regions (FM:2.04). The use of "light on the land" suppression techniques to reduce the impacts of fire response on park values will be negotiated with the responsible municipality.

Fire response within Clear Creek Forest will focus on preventing personal injury, value loss and social disruption. Fires that pose a threat to public health and safety, property and infrastructure, or other values are a priority for suppression. Prescribed burning to maintain old field and forb prairie and significant relic prairie species may be considered. Plans for any prescribed burning will be developed in accordance with MNR policy.

9.7 Fish and Wildlife

Hunting and commercial trapping will not be permitted in Clear Creek Forest. Animal (e.g., white-tailed deer, turkey and raccoon) populations may be controlled when essential to human health and safety, the health of the species outside the park, or the values for which the park has been established. The reduction of overabundant populations, such as white-tailed deer, may be undertaken if population numbers exceed the park's carrying capacity. Ontario Parks will manage deer numbers in the park at a level that represents the best scientific judgement as to what the habitat can sustainably support. If required, the population will be reduced as quickly as possible to within carrying capacity, and then maintained as required to keep population numbers stable. Wildlife population reduction will be undertaken

directly by Ontario Parks, or through partnerships under the supervision of Ontario Parks. Where control is necessary, techniques will be used having minimal affects on the components of the park's environment. Appropriate methods of population control may be undertaken by Ontario Parks, or through partners under the supervision of Ontario Parks.

Recreational fishing is subject to provincial and federal regulations (e.g. the *Fish and Wildlife Conservation Act* as set out in the *Ontario Recreational Fishing Regulations Summary*).

The stone foundation associated with a former farm house will be retained as a potential snake hibernaculum (overwintering site). The adjacent abandoned dug water wells will be filled in an appropriate manner to serve as potential snake hibernacula.

9.8 Cultural Resources

Care will be taken to ensure that any site restoration projects do not adversely impact the archaeological site in the nature reserve.

An archaeological assessment was undertaken of the Clearville Prehistoric Village Site in 1939, with some additional work undertaken on the property as recently as 1993. Additional authorized archaeological assessments may be undertaken in the nature reserve if evidence of additional archaeological sites or artefacts emerges.

Further pit and mound vegetation restoration should strongly consider and anticipate the possible exposure of artefacts. This restoration technique should not be employed in areas occupied by or adjacent to known archaeological sites.

No trails will be developed in the vicinity of the known archaeological site.

The Ministry of Culture and local First Nations will be consulted to determine the most appropriate measures for preserving and protecting Aboriginal cultural resources in the nature reserve. Cultural heritage resources within the park will be identified, assessed and protected in keeping with MNR's *Technical Guideline for Cultural Heritage Resources* (2006).

9.9 Industrial / Commercial Uses

The following uses are not permitted in Clear Creek Forest:

- commercial forestry;
- bait fish harvesting;
- commercial trapping;
- prospecting, staking mining claims, developing mineral interests, working mines;
- extraction of sand, gravel, topsoil or peat; and
- commercial hydroelectric power development.

9.10 Research

Scientific research by qualified individuals contributing to the knowledge of natural and cultural history, and to environmental management, will be encouraged. All research will be conducted by or authorized by Ontario Parks. Research projects will be administered through park policy directive PM 2.45 (Research Activities in Provincial Parks) and requires a research permit. Research must also meet all requirements under applicable provincial and federal legislation. Approved research and monitoring activities must be consistent with Ontario Parks' *Research and Information Strategy: Setting Priorities* (1997). Temporary facilities in support of approved research and monitoring activities may be considered.

9.11 Inventory and Monitoring

Planning and management decisions are intended to ensure the ecological sustainability of protected areas (which includes social and economic components). Ontario Parks will ensure that these decisions are made with the best available information. Where this information is lacking, Ontario Parks may conduct inventories and monitoring, as necessary, to provide this information. Such efforts will be undertaken based on established methodologies and best practices. This will foster an adaptive management approach to protected areas management. The following are broad approaches to identifying inventory and monitoring needs: management actions identified in this management plan; public input; routine park maintenance activities; staff knowledge and experiences and environmental scans.

At risk and significant species will be monitored within the nature reserve. Development of management prescriptions and any associated implementation activities, if deemed necessary,

should be with the direct involvement and support of the appropriate recovery team.

Vegetation restoration, and associated recovery efforts plus species at risk and rare species will be monitored (e.g., aerial and/or ground level photographs may be taken on a regular basis).

10.0 OPERATIONS POLICIES

Policies governing operations for Clear Creek Forest will be incorporated into the operations of Rondeau Provincial Park. Operations of Clear Creek Forest will include: budget, staffing, maintenance schedules, enforcement and emergency services. Operations will be consistent with the approved *Ontario Provincial Parks Minimum Operating Standards* (1992) and will be reviewed annually and updated as required.

Ontario Parks' staff will report noteworthy occurrences (e.g. incidents, infractions, etc.) in the protected area to a designated representative of the NCC.

The park boundary will be posted. Fencing and gating may be installed where required to prohibit unauthorized access.

The former agricultural pump house will be removed and the water well will be sealed in accordance with current standards.

Should the abandoned oil and gas well produce fluids at the surface, it will be re-drilled and sealed in accordance with current standards.

10.1 Natural Heritage Education

The goal of the natural heritage education program is to develop visitor awareness and appreciation of Ontario Parks' natural and cultural heritage, fostering a commitment to its protection for future generations. Programming will include the three components of Natural Heritage Education: information, interpretation, and outdoor recreation.

10.1.1 Information

Objectives for the information component of the natural heritage education program include:

- inform visitors about the nature reserve, its features, facilities and management;

- instill a sense of respect for the park environment;
- describe the lease agreement that both Ontario Parks and the NCC are partner to; and
- provide a means for the visitor and stakeholders to communicate with Ontario Parks regarding park management.

The preceding objectives may be achieved through such means as a trail guide and interpretive panels.

10.1.2 Interpretation

Clear Creek Forest contains several significant and interesting natural features worthy of interpretation. Natural heritage education facilities and services will be very limited in scope, focusing on a nature trail in conjunction with unobtrusive interpretive panels.

Services for visitors, including school groups, will be primarily oriented toward self-guided use.

10.1.3 Outdoor Recreation

The nature trail will be only for pedestrian use.

10.2 Recreation Management

Low intensity recreational use will be confined to walking, cross country skiing and snowshoeing on a designated self-guided interpretive trail, as well as fishing. Examples of prohibited activities in the nature reserve include: camping, the operation of off-road vehicles, snowmobiles or all-terrain vehicles; mountain biking; hunting; and horseback riding. Any use or activity permitted in the plan which negatively impacts on natural values may be confined or discontinued by Ontario Parks.

11.0 DEVELOPMENT POLICIES

All development undertaken by Ontario Parks, or by partners on its behalf, will comply with *A Class Environmental Assessment for Provincial Parks and Conservation Reserves* and will be carried out in accordance with approved site and development plans that meet development standards for provincial parks.

Areas proposed for development will require prior assessment for significant cultural heritage features and natural values – such as species at risk – to

ensure these values are identified and protected at the site.

11.1 Access

Subject to either acquisition or a cooperative agreement with the Municipality of Chatham-Kent, public access to Clear Creek Forest may be provided via a parking lot located at the northwest corner of the intersection of Duart Road and Cochrane Line. Alternatively, a parking area may be developed within the former open field west of Duart Road. The two parking options are shown on Figure 2. A parking lot would be designed for a maximum of eight vehicles.

Other development will be confined to an entrance sign, boundary signs, and fencing and gates as required to prevent unauthorized access.

11.2 Trail

A self-guided interpretive trail was developed by the NCC for use by walkers. The trail entrance is located south of Cochrane Line, opposite the proposed parking area.

The existing trail may be expanded (e.g., construction of a loop) or realigned to minimize impacts to sensitive species or features. Any unauthorized all-terrain vehicle trails will be closed and rehabilitated.

11.3 Interpretive Facilities

Interpretive facilities will be modest, and may consist of interpretive panels at key locations along the walking trail.

11.4 Partnerships

In the implementation of the approved park management plan, Ontario Parks will consult with the NCC. Opportunities for partnerships involving volunteers, school boards, non-government organizations or others will be explored.

12.0 IMPLEMENTATION POLICIES

Park development, operations and resource stewardship will be contingent upon the availability of funding and unforeseeable changes in priorities or policy. Implementation of the management plan and operation of the park will meet the requirements of the *Environmental Assessment Act*, *Environmental Bill of Rights*, *Provincial Parks and Conservation Reserves Act*, *Endangered Species Act*, and other pertinent legislation.

All aspects of park management, development and operation will be undertaken in accordance with the requirements of *A Class Environmental Assessment for Provincial Parks and Conservation Reserves*.

Subject to the availability of funding and the willingness of landowners to sell, additional adjacent lands may be secured to consolidate and protect additional natural values associated with the Kent-Elgin Shoreline Life Science ANSI.

Except where indicated otherwise in this plan, or as required by *A Class Environmental Assessment for Provincial Parks and Conservation Reserves*, no further public consultation will be required for the following park planning, operation or development projects to proceed, within a five year time horizon:

12.1 Stage One

- Processing a park boundary regulation under the *Provincial Parks and Conservation Reserves Act*;
- Implementation of a monitoring program to measure vegetation, restoration, species at risk and the ecological integrity of the park;
- Closure of unauthorized trails;
- Removal of old pump house and sealing of associated water well;
- Filling abandoned dug water wells; and
- Inspection of oil and gas well by Petroleum Resources Centre to determine if it requires resealing.

12.2 Stage Two

- Installation of an entrance sign, boundary markers and interpretive panels;
- Rehabilitation of the former gravel pit;

- Development of a parking lot (six to eight vehicles); and
- Installation of fencing and gates as required.

Development projects will be contingent upon availability of funding and unforeseeable changes in priorities or park policy.

In accordance with the lease agreement between Ontario Parks and the NCC, Ontario Parks shall provide the NCC with an annual report on Clear Creek Forest.

13.0 PLAN EXAMINATION AND AMENDMENT

The park management plan for Clear Creek Forest will be examined by Ontario Parks every 10 years to determine the need for amendments to, or a re-write of, the document.

An amendment can be considered to address specific issues or needs.

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APPENDIX A – SPECIES LIST ¹

<u>Common Name</u>	<u>Scientific Name</u>
red oak	<i>Quercus rubra</i>
sugar maple	<i>Acer saccharum</i>
American beech	<i>Fagus grandifolia</i>
tall ironweed	<i>Vernonia gigantea</i> ssp. <i>Gigantea</i>
southern flying squirrel	<i>Glaucomys volans</i>
giant swallowtail	<i>Papilio cresphontes</i>
red-headed woodpecker	<i>Melanerpes erythrocephalus</i>
loggerhead shrike	<i>Lanius ludovicianus</i>
Acadian flycatcher	<i>Empidonax virescens</i>
garlic mustard	<i>Alliaria petiolata</i>

¹ As highlighted in this plan. Additional species observations are provided in sources identified in Section 14.0 References.

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